

AMENDMENTS TO THE CLAIMS

Claims 1-106 (Canceled)

107. (New) A conjugate comprising a bacterial superantigen and an antibody moiety, wherein

the superantigen is a variant of Staphylococcal enterotoxin E, reference SEQ ID NO: 7, and differs from Staphylococcal enterotoxin E in having amino acid substitutions as follows, wherein the positions of the amino acid substitutions are relative to the amino acid positions in reference SEQ ID NO: 7:

(i) amino acid position 20 is glycine or a conserved variant thereof, amino acid position 21 is threonine or a conserved variant thereof, amino acid position 24 is glycine or a conserved variant thereof, amino acid position 27 is lysine or a conserved variant thereof, and amino acid position 227 is serine or a conserved variant thereof or alanine or a conserved variant thereof; and

(ii) wherein at least one amino acid in a region C is substituted with a different amino acid, such that the variant has reduced seroreactivity compared to the seroreactivity of Staphylococcal enterotoxin having the amino acid sequence of SEQ ID NO: 7, and the position of the amino acid substitution in region C is selected from the group consisting of amino acid positions 74, 75, 78, 79, 81, 83 and 84;

and wherein the antibody moiety is a full length antibody, or a molecule-binding antibody active fragment, that is directed against a cancer-associated cell surface structure.

108. (New) The conjugate of claim 107, wherein said cancer is selected from the group consisting of lung, breast, colon, kidney, pancreatic, ovarian, stomach, cervix and prostate cancer.

109. (New) The conjugate of claim 108, wherein the cancer is colon cancer and the antibody moiety is C215Fab.

110. (New) The conjugate of claim 108, wherein the cancer is lung cancer and the antibody moiety is 5T4Fab.
111. (New) The conjugate of claim 110, wherein the conjugate has the amino acid sequence of SEQ ID NO: 1.
112. (New) The conjugate of claim 107, wherein the substitution at amino acid position 227 is alanine.
113. (New) The conjugate of claim 107, wherein the substitution at amino acid position 227 is serine.
114. (New) The conjugate of claim 107, wherein the variant further comprises an amino acid substitution in a region E, wherein at least one amino acid in the region E is substituted with a different amino acid, such that the variant has reduced seroreactivity compared to the seroreactivity of Staphylococcal enterotoxin having the amino acid sequence of SEQ ID NO: 7, and the position of the amino acid substitution in region E is selected from the group consisting of amino acid positions 217, 220, 222, 223, 225 and 227.
115. (New) The conjugate of claim 114, wherein the variant has the amino acid sequence of SEQ ID NO: 2.
116. (New) The conjugate of claim 114, wherein said cancer is selected from the group consisting of lung, breast, colon, kidney, pancreatic, ovarian, stomach, cervix and prostate cancer.
117. (New) The conjugate of claim 116, wherein the cancer is colon cancer and the antibody moiety is C215Fab.
118. (New) The conjugate of claim 116, wherein the cancer is lung cancer and the antibody moiety is 5T4Fab.
119. (New) The conjugate of claim 107, wherein the substituted amino acid in region C comprises an amino acid selected from the group consisting of threonine or a conserved variant thereof at position 74, alanine or a conserved variant thereof at

position 75, serine or a conserved variant thereof at position 78, glutamic acid or a conserved variant thereof at position 79, glutamic acid or a conserved variant thereof at position 81, serine or a conserved variant thereof at position 83, serine or a conserved variant thereof at position 84.

120. (New) The conjugate of claim 119, wherein said cancer is selected from the group consisting of lung, breast, colon, kidney, pancreatic, ovarian, stomach, cervix and prostate cancer.
121. (New) The conjugate of claim 120, wherein the cancer is colon cancer and the antibody moiety is C215Fab.
122. (New) The conjugate of claim 120, wherein the cancer is lung cancer and the antibody moiety is 5T4Fab.
123. (New) The conjugate of claim 122, wherein the conjugate has the amino acid sequence of SEQ ID NO: 1.
124. (New) The conjugate of claim 114, wherein the substituted amino acid in region E comprises an amino acid selected from the group consisting of threonine or a conserved variant thereof at position 217, serine or a conserved variant thereof at position 220, threonine or a conserved variant thereof at position 222, serine or a conserved variant thereof at position 223, and serine or a conserved variant thereof at position 225.
125. (New) The conjugate of claim 124, wherein the variant has the amino acid sequence of SEQ ID NO: 2.
126. (New) The conjugate of claim 124, wherein said cancer is selected from the group consisting of lung, breast, colon, kidney, pancreatic, ovarian, stomach, cervix and prostate cancer.
127. (New) The conjugate of claim 126, wherein the cancer is colon cancer and the antibody moiety is C215Fab.

128. (New) The conjugate of claim 126, wherein the cancer is lung cancer and the antibody moiety is 5T4Fab.

129. A pharmaceutical composition comprising an aqueous medium, and a conjugate comprising a bacterial superantigen and an antibody moiety, wherein

the superantigen is a variant of Staphylococcal enterotoxin E, reference SEQ ID NO: 7, and differs from Staphylococcal enterotoxin E in having amino acid substitutions as follows, wherein the positions of the amino acid substitutions are relative to the amino acid positions in reference SEQ ID NO: 7:

(i) amino acid position 20 is glycine or a conserved variant thereof, amino acid position 21 is threonine or a conserved variant thereof, amino acid position 24 is glycine or a conserved variant thereof, amino acid position 27 is lysine or a conserved variant thereof, and amino acid position 227 is serine or a conserved variant thereof or alanine or a conserved variant thereof; and

(ii) wherein at least one amino acid in a region C is substituted with a different amino acid, such that the variant has reduced seroreactivity compared to the seroreactivity of Staphylococcal enterotoxin having the amino acid sequence of SEQ ID NO: 7, and the position of the amino acid substitution in region C is selected from the group consisting of amino acid positions 74, 75, 78, 79, 81, 83 and 84;

and wherein the antibody moiety is a full length antibody, or a molecule-binding antibody active fragment, that is directed against a cancer-associated cell surface structure.

130. (New) The conjugate of claim 129, wherein said cancer is selected from the group consisting of lung, breast, colon, kidney, pancreatic, ovarian, stomach, cervix and prostate cancer.

131. (New) The conjugate of claim 130, wherein the cancer is colon cancer and the antibody moiety is C215Fab.

132. (New) The conjugate of claim 130, wherein the cancer is lung cancer and the antibody moiety is 5T4Fab.

133. (New) The conjugate of claim 132, wherein the conjugate has the amino acid sequence of SEQ ID NO: 1.
134. (New) The conjugate of claim 129, wherein the substitution at amino acid position 227 is alanine.
135. (New) The conjugate of claim 129, wherein the substitution at amino acid position 227 is serine.
136. (New) The conjugate of claim 129, wherein the variant further comprises an amino acid substitution in a region E, wherein at least one amino acid in the region E is substituted with a different amino acid, such that the variant has reduced seroreactivity compared to the seroreactivity of Staphylococcal enterotoxin having the amino acid sequence of SEQ ID NO: 7, and the position of the amino acid substitution in region E is selected from the group consisting of amino acid positions 217, 220, 222, 223, 225 and 227.
137. (New) The conjugate of claim 136, wherein the variant has the amino acid sequence of SEQ ID NO: 2.
138. (New) The conjugate of claim 136, wherein said cancer is selected from the group consisting of lung, breast, colon, kidney, pancreatic, ovarian, stomach, cervix and prostate cancer.
139. (New) The conjugate of claim 138, wherein the cancer is colon cancer and the antibody moiety is C215Fab.
140. (New) The conjugate of claim 138, wherein the cancer is lung cancer and the antibody moiety is 5T4Fab.
141. (New) The conjugate of claim 129, wherein the substituted amino acid in region C comprises an amino acid selected from the group consisting of threonine or a conserved variant thereof at position 74, alanine or a conserved variant thereof at position 75, serine or a conserved variant thereof at position 78, glutamic acid or a conserved variant thereof at position 79, glutamic acid or a conserved variant

thereof at position 81, serine or a conserved variant thereof at position 83, serine or a conserved variant thereof at position 84.

142. (New) The conjugate of claim 141, wherein said cancer is selected from the group consisting of lung, breast, colon, kidney, pancreatic, ovarian, stomach, cervix and prostate cancer.
143. (New) The conjugate of claim 142, wherein the cancer is colon cancer and the antibody moiety is C215Fab.
144. (New) The conjugate of claim 142, wherein the cancer is lung cancer and the antibody moiety is 5T4Fab.
145. (New) The conjugate of claim 122, wherein the conjugate has the amino acid sequence of SEQ ID NO: 1.
146. (New) The conjugate of claim 136, wherein the substituted amino acid in region E comprises an amino acid selected from the group consisting of threonine or a conserved variant thereof at position 217, serine or a conserved variant thereof at position 220, threonine or a conserved variant thereof at position 222, serine or a conserved variant thereof at position 223, and serine or a conserved variant thereof at position 225.
147. (New) The conjugate of claim 146, wherein the variant has the amino acid sequence of SEQ ID NO: 2.
148. (New) The conjugate of claim 146, wherein said cancer is selected from the group consisting of lung, breast, colon, kidney, pancreatic, ovarian, stomach, cervix and prostate cancer.
149. (New) The conjugate of claim 148, wherein the cancer is colon cancer and the antibody moiety is C215Fab.
150. (New) The conjugate of claim 148, wherein the cancer is lung cancer and the antibody moiety is 5T4Fab.